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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,207	03/17/2005	Harald Hagen	11138-018	4540

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EXAMINER	
RIPLEY, JAY R	
ART UNIT	**PAPER NUMBER**
3679	

DATE MAILED: 12/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/528,207	HAGEN, HARALD	
	Examiner	Art Unit	
	Jay R. Ripley	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03/17/2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 March 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03/17/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Information Disclosure Statement

2. The information disclosure statement (IDS) filed on 03/17/2005 was considered by the examiner.

Drawings

3. Figures 5-9 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means"

and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it contains 201 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. In regard to claim 1, there is an inconsistency between the language in the preamble and certain portions in the body of the claim, thereby making the scope of the claim unclear. The preamble in claim 1 clearly indicates that a subcombination is being claimed, e.g., "An intermediate adapter ring for a screw-in part". This language would lead the examiner to believe that the Applicant intends to claim only the subcombination of an adapter intermediate ring, the screw in part being only functionally recited. This presents no problem as long as the body of the claim also refers to the functionality, such as, "for attachment to said".

9. The problem arises when the screw-in part is positively recited within the body of the claim, such as "having on a side facing the actuating shoulder, a first seat, which, together with the receiving groove and the actuating shoulder, forms a first seal chamber for the first sealing

ring" in line 12. There is an inconsistency within the claim; the preamble indicates the subcombination, while in at least one instance in the body of the claim there is a positive recital of structure indicating that the combination of an adapter intermediate ring and screw-in part are being claimed. The examiner cannot be sure if applicant's intent is to claim merely the adapter intermediate ring or the adapter intermediate ring in combination with the screw-in part.

10. Applicant is required to clarify what the claims are intended to be drawn to, i.e., either the adapter intermediate ring alone or the combination of the adapter intermediate ring with the screw-in part. Applicant should make the language of the claim consistent with applicant's intent. In formulating a rejection on the merits, the examiner is considering that the claims are drawn to the subcombination and the claims will be rejected accordingly. If applicant indicates by amendment that the combination claim is the intention, the language in the preamble should be made consistent with the language in the body of the claims. If the intent is to claim the subcombination, then the body of the claims must be amended to remove positive recitation of the combination. The examiner is interpreting the claims such that the combination of adapter intermediate ring and screw in part are being positively claimed.

11. Further in regard to claim 1, the phrases "of the type" in line 2 and "flange-like" in line 5 renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "of the type" and "flange-like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

12. Further in regard to claim 1, is the "sealing ring" in line 8 the same "first sealing ring" recited in line 14?

13. Also in regard to claim 1, it is recited in line 17 the limitation "the mouth side". There is insufficient antecedent basis for this limitation in the claim.

14. In regard to claim 2, the term "optimum" is a relative term which renders the claim indefinite. The term "optimum" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. How is this "optimum compression" in line 4 defined? By what criteria?

15. Also in regard to claim 2, the term "essentially" is a relative term which renders the claim indefinite. The term "essentially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. At what level of deformation of the second sealing ring meets the criteria of "essentially without radial deformation acting against the externally threaded portion"? Less than half of the deformation?

16. In regard to claim 5, in line 7 the term "requisite" is a relative term which renders the claim indefinite. The term "requisite" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. What determines the "requisite compression of the first sealing ring"?

17. Further in regard to claim 5, in line 10 the term "correct" is a relative term which renders the claim indefinite. The term "correct" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would

not be reasonably apprised of the scope of the invention. What determines a "correct plugged-in position"?

18. Also in regard to claim 5, it is unclear what the recited phrase "the thickness of the intermediate ring is dimensioned according to the threaded bore such that both the screw-in part together with additional parts mounted thereon, a plug holding element can be screwed in completely" starting in line 2 is meant to convey. As best understood, the recited phrase is meant to claim the intermediate ring has a length that limits how far the screw-in part can be screwed in. Applicant is required to clarify the language of the claim as to what limitation is being positively claimed.

Claim Rejections - 35 USC § 102

19. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

20. Claims 1-5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim (U.S. 5,240,290).

21. In regard to claim 1, Kim, in Figure 4 below, discloses an intermediate ring (part 40) for a screw-in part (part 52) of a fluid plug-in system, the screw-in part having a through-opening (as observed in marked Figure 4 below), an externally threaded portion (part 54) for screwing into a threaded bore of a base part, an actuating shoulder (as observed in marked Figure 4 below), and a receiving groove (as observed in marked Figure 4 below and as part 56, a smooth surface above

the threaded portion in Figure 2A), formed in the transition between the actuating shoulder and the externally threaded portion with a sealing ring comprising the intermediate ring adapted to be fitted onto the externally threaded portion (as observed in Figure 4 below) and having first and second axially opposite annular portions (as observed in marked Figure 4 below), the first annular portion, having on a side facing the actuating shoulder, a first seat (part 42A), which, together with the receiving groove and the actuating shoulder, forms a first seal chamber (as observed in Figure 4 below) for the first sealing ring, and the second annular portion having a second seat (part 41A) for a second sealing ring such that, when the screw-in part is screwed into the threaded bore having a surrounding surface adjacent on the mouth side, a second seal chamber (as observed in Figure 4 below) for the second sealing ring is formed between the second seat, the surrounding surface and the externally threaded portion.

22. In regard to claim 2, Kim discloses the intermediate ring further comprising two sealing ring seats and the associated sealing rings are formed such that, in a mounted state, compression of the first and second sealing rings is achieved and in this connection the second sealing ring is compressed mainly axially essentially without radial deformation acting against the externally threaded portion (in column 5, lines 47-57, the dimensions of the seal chambers and their respective seals are disclosed, directly related to seal compression; in column 7, lines 38-64, the sealing action of intermediate ring and seals is disclosed and no disclosure is made of essential radial deformation of the second seal ring towards the threads; and as observed in Figure 4 below, the second seal is not deformed against the threads to a degree greater than any of the of the surrounding surfaces of the chamber).

23. In regard to claim 3, Kim discloses that the intermediate ring first and second annular portions are separated by an internal radial annular web (as observed in marked Figure 4 below), which divides the first and second seats from one another.

24. In regard to claim 4, Kim discloses the intermediate ring sealing ring seats formed by a radial step surface and an approximately conically widening delimiting surface adjacent to it on the outside (as observed in marked cut-out of Figure 4 below).

25. In regard to claim 5, as best understood, Kim discloses that the thickness of the intermediate ring is dimensioned according to the threaded bore and the screw-in part together with additional parts mounted thereon, such that a plug holding element can be screwed in completely to compress the first sealing ring and the plug part can be plugged completely into the through-opening of the screw-in part into a plugged-in position (in column 5, lines 47-57, the dimensions of the seal chambers and their respective seals are disclosed, directly related to seal compression; in column 7, lines 38-64, the sealing action of intermediate ring and seals is disclosed and no seal activity could occur if the intermediate ring were too long or too short; and the a plug part can be inserted into the through-opening, the amount of insertion dependent upon plug part dimensions).

26. In regard to claim 6, the Figure 4 cross-hatching indicates the material is metal. Note, it is the patentability of the product, and not recited process steps, that is to be determined and thus how the intermediate ring was formed is of little consequence to the patentability determination of the final product. Kim possesses an intermediate ring that meets the structure of the claim.

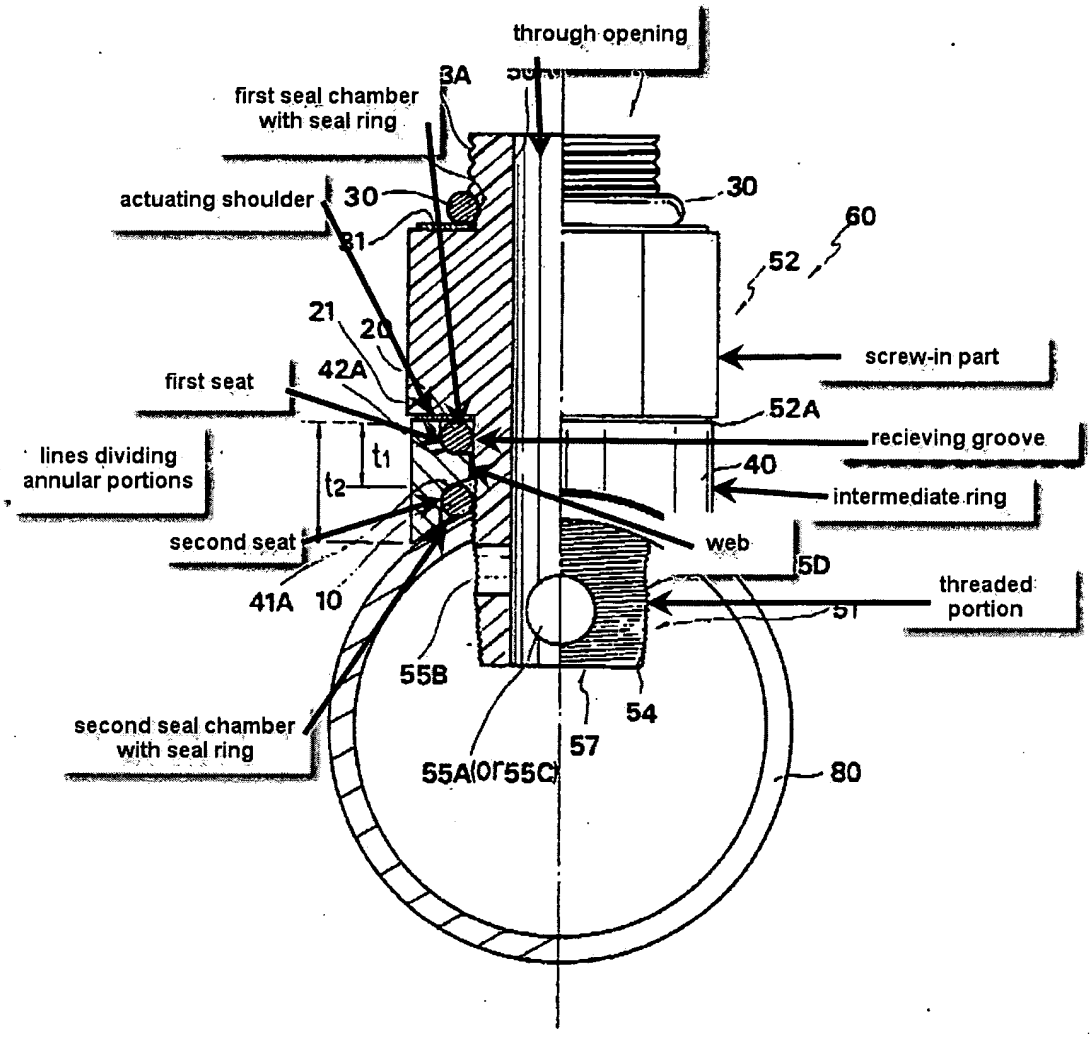
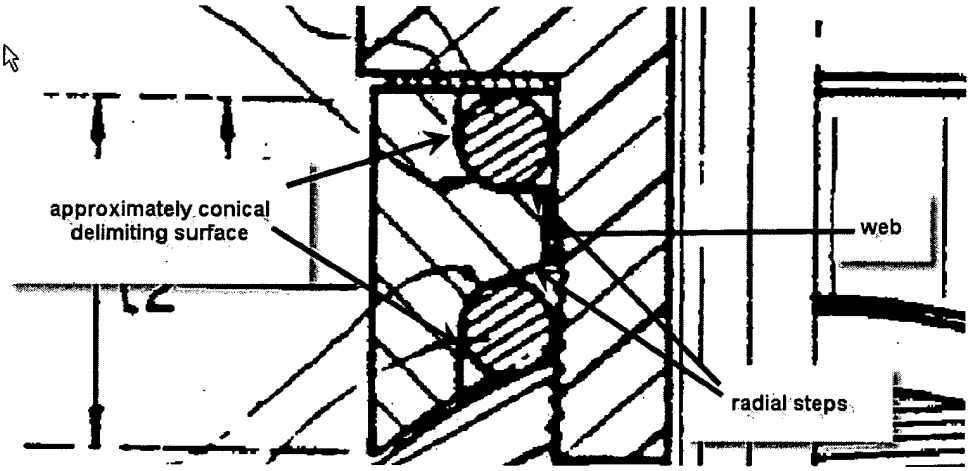


FIG. 4

(marked Kim Figure 4)



(marked cut-out of Kim Figure 4)

27. Claims 1-4, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Neuschotz (U.S. 3,212,796).

28. In regard to claim 1, Neuschotz, in Figure 4 below, discloses an intermediate ring (as observed in marked Figure 4 below) for a screw-in part (as observed in marked Figure 4 below) of a fluid plug-in system, the screw-in part having a through-opening (as observed in marked Figure 4 below), an externally threaded portion (as observed in marked Figure 4 below) for screwing into a threaded bore of a base part, an actuating shoulder (as observed in marked Figure 4 below), and a receiving groove (as observed in marked Figure 4 below), formed in the transition between the actuating shoulder and the externally threaded portion with a sealing ring comprising the intermediate ring adapted to be fitted onto the externally threaded portion (as observed in Figure 4 below, the intermediate ring is on the threaded portion of the screw-in part) and having first and second axially opposite annular portions (lines added to marked Figure 4 below to emphasize the portions), the first annular portion, having on a side facing the actuating shoulder, a first seat (part 31), which, together with the receiving groove and the actuating

shoulder, forms a first seal chamber (as observed in Figure 4 below) for the first sealing ring, and the second annular portion having a second seat (part 28) for a second sealing ring such that, when the screw-in part is screwed into the threaded bore having a surrounding surface adjacent on the mouth side, a second seal chamber (as observed in Figure 4 below) for the second sealing ring is formed between the second seat, the surrounding surface and the externally threaded portion.

29. In regard to claim 2, Neuschotz discloses intermediate ring further comprising two sealing ring seats and the associated sealing rings are formed such that, in a mounted state, compression of the first and second sealing rings (as observed in marked cut-out of Figure 4) is achieved and in this connection the second sealing ring is compressed mainly axially essentially without radial deformation acting against the externally threaded portion (as can be observed in marked cut-out of Figure 4, the second seal ring does not contact the threads).

30. In regard to claim 3, Neuschotz discloses that the first and the second annular portions are separated by an internal radial web (as observed in marked cut-out of Figure 4 below), which divides the first and second seats from one another.

31. In regard to claim 4, Neuschotz discloses the intermediate ring sealing ring seats formed by a radial step surface and an approximately conically widening delimiting surface adjacent to it on the outside (as observed in marked cut-out of Figure 4 below).

32. In regard to claim 6, Neuschotz discloses that the first annular portion is designed to be smaller in diameter than the second annular portion (as observed in marked cut-out of Figure 4).

33. In regard to claim 7, Neuschotz discloses that the intermediate rig is metal (column 3, lines 13-16). Note, it is the patentability of the product, and not recited process steps, that is to be

determined and thus how the intermediate ring was formed is of little consequence to the patentability determination of the final product. Neuschotz possesses an intermediate ring that meets the structure of the claim.

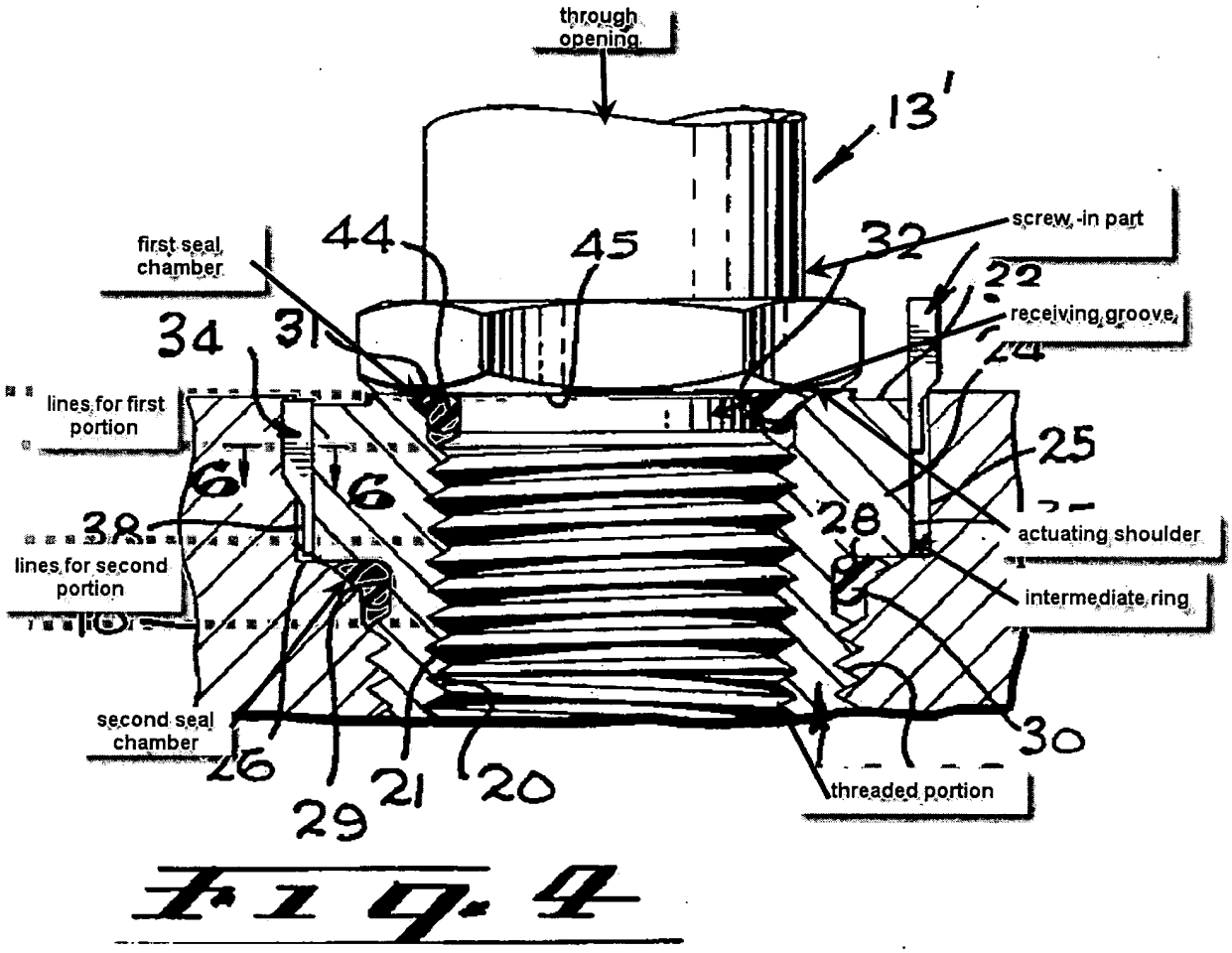
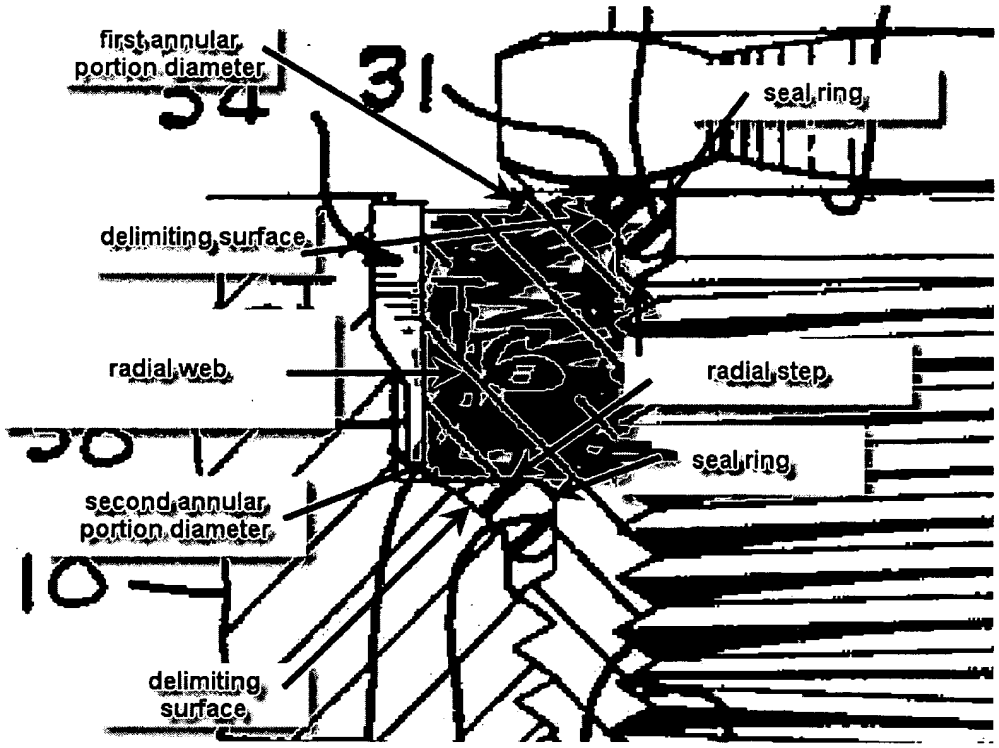


Fig. 4

(marked Neuschotz Figure 4)



(marked cut-out Neuschotz Figure 4)

Claim Rejections - 35 USC § 103

34. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

35. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagen et al (U.S. 6,027,144) and further in view of Creamer (U.S. 2,904,355).

36. In regard to claim 1, Hagen et al, in Figure 8 below, disclose the claimed invention except for the sealing ring comprising an intermediate ring having a first and a second axially opposite annular portions, the first annular portion having on a side facing the actuating shoulder, a first seat, which, together with the receiving groove and the actuating shoulder, forms a first seal chamber for the first sealing ring, and the second annular portion having a second seat for a second sealing ring such that, when the screw-in part is screwed into the threaded bore having a surrounding surface adjacent on the mouth side, a second seal chamber for the second sealing ring is formed between the second seat, the surrounding surface and the externally threaded portion. Creamer, in Figure 5 below, teaches a sealing ring with an intermediate ring to allow a screw-in part to be radially orientated in a base part (column 1, lines 53-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the screw-in part of Hagen et al with the sealing ring as taught by Creamer to allow radial orientation of the screw-in part in the base part.

37. In regard to claim 2, Creamer further teaches his seal ring has two seal seats and associated sealing rings are formed such that, in the mounted state, compression of the first and second sealing rings is achieved (column 4, lines 48-61) and in this connection the second sealing ring is compressed mainly axially without radial deformation acting against the externally threaded portion (as can be observed in marked Figure 5, below, the sealing ring does not contact the threads). It would have been obvious to one of ordinary skill in the art at the time the invention was made provide the screw-in part of Hagen et al with the seal ring as taught by Creamer to allow the screw-in part to be sealed when incorporated in a high pressure fluid system (column 1, lines 59-63).

38. In regard to claim 3, Creamer further teaches his seal ring has an internal annular web dividing the first and second annular portions and the first and second seats to provide a double seal arrangement and eliminate leaks between the base part and the screw-in part (column 4, lines 42-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the screw-in part of Hagen et al with the seal ring as taught by Creamer to eliminate leeks.

39. In regard to claim 5, the intermediate ring of Creamer is capable of being dimensioned according to the threaded bore to allow a plug holding element to be screwed in completely to compress the first sealing ring.

40. In regard to claim 6, Creamer further teaches that his intermediate ring has a first annular portion smaller in diameter than the second annular portion (as observed in marked Figure 5 below).

41. In regard to claim 7, the intermediate ring of Creamer is formed of a metal (as indicated by the cross-hatching). Note, it is the patentability of the product, and not recited process steps, that is to be determined and thus how the intermediate ring was formed is of little consequence to the patentability determination of the final product. Creamer possesses an intermediate ring that meets the structure of the claim.

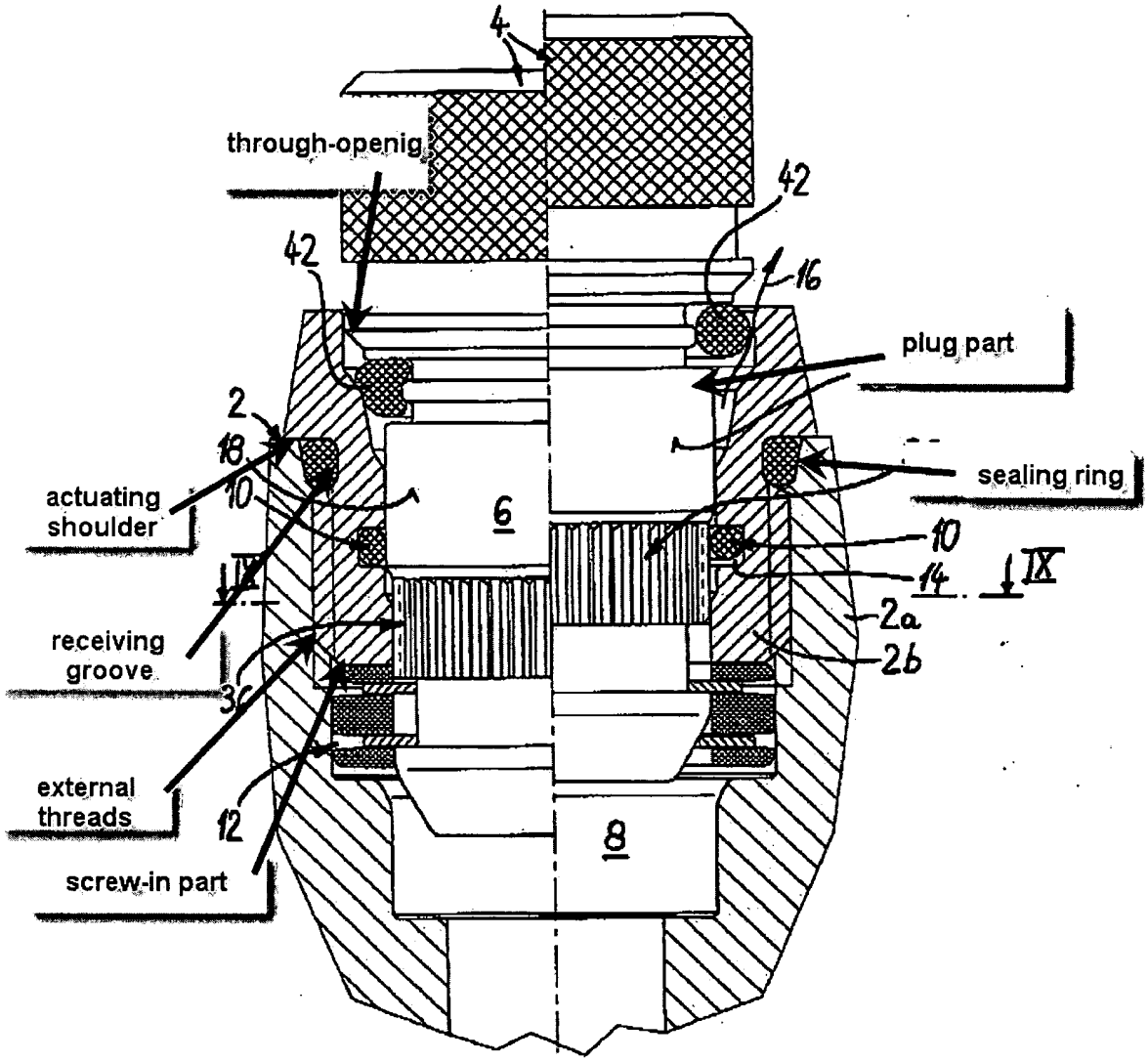


FIG.8

(marked Hagen et al Figure 8)

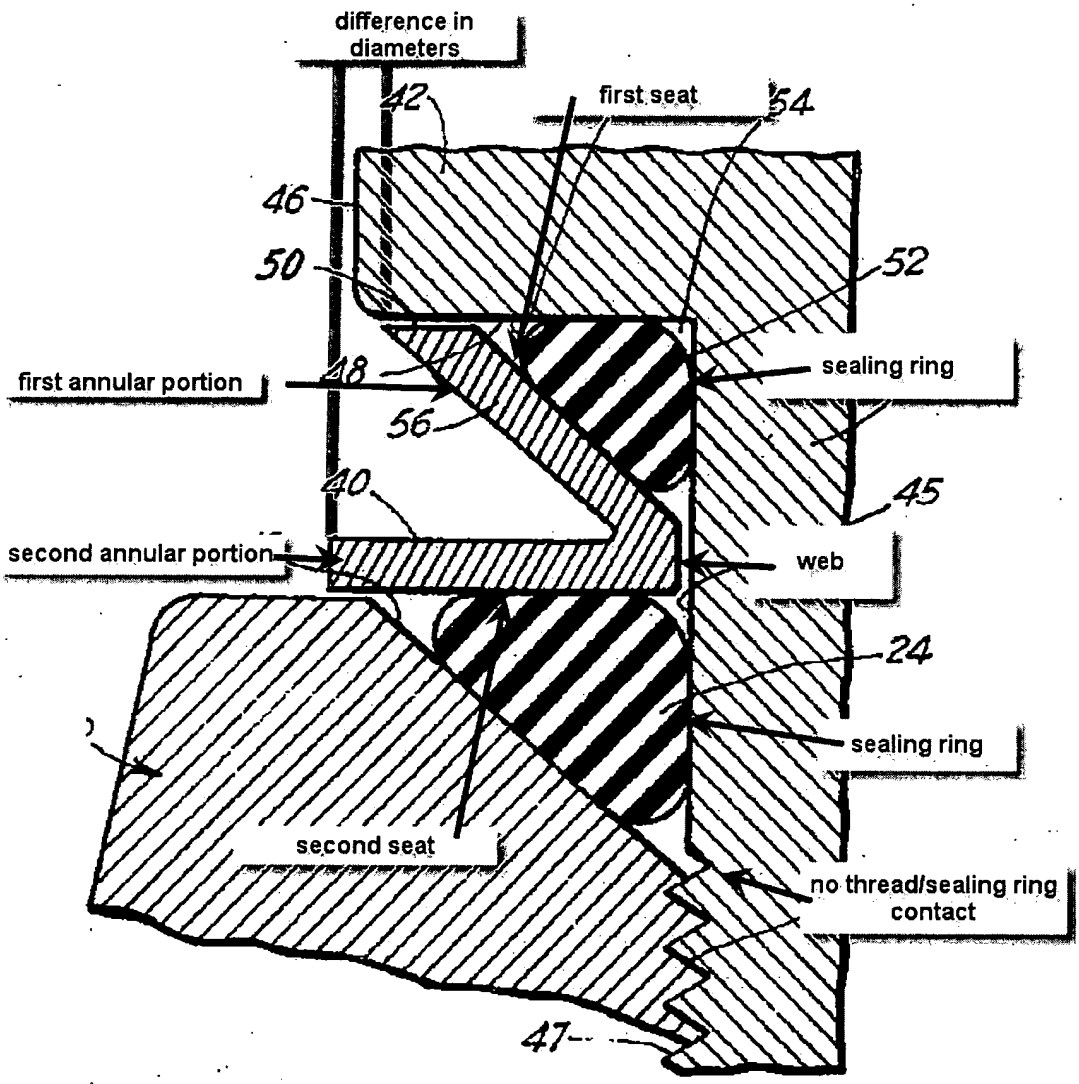


Fig. 5

(marked Creamer Figure 5)

Conclusion

42. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rives (U.S. 4,895,215), and Murray (U.S. 4,280,390), and Wagner (U.S. 3,519,279).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay R. Ripley whose telephone number is 571-272-7535. The examiner can normally be reached on 6:00AM - 3:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

J. R. Ripley
08 DEC 2006

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